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PUBLIC SAFETY RADIO

PR 93-105

COMMUNICATIONS PLAN

FOR

REGION 48

**THE UNITED STATES
VIRGIN ISLANDS**

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GOVERNMENT OF
THE VIRGIN ISLANDS OF THE UNITED STATES

VIRGIN ISLANDS POLICE DEPARTMENT

CRIMINAL JUSTICE COMPLEX
CHARLOTTE AMALIE, ST. THOMAS, V.I. 00802

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

MS. DONNA SEARCY
SECRETARY
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON D.C. 20554

22 JANUARY 1993

Dear Ms. Searcy:

Enclosed is the final copy of the United States Virgin Islands, Region 48, Regional Plan.

Please call me if you have any questions.

Sincerely,


LT. Norman Anderson, Chairman

United States Virgin Islands

Region 48

V.I. POLICE DEPT.

CRIMINAL JUSTICE COMPLEX

GENERAL DELIVERY

ST. THOMAS, V.I. 00802

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PUBLIC SAFETY RADIO

COMMUNICATIONS PLAN

FOR

REGION 48

THE UNITED STATES
VIRGIN ISLANDS

TABLE OF CONTENTS

1.0 SCOPE

1.1	Introduction.....	4
1.2	Purpose.....	4

2.0 AUTHORITY

2.1	Regional Planning Committee.....	5
2.2	Planning Committee Formation.....	5
2.3	National Interrelationships.....	5
2.4	Federal Interoperability.....	6
2.5	Regional Review Committee.....	6

3.0 SPECTRUM UTILIZATION

3.1	Region Defined.....	7
3.2	Region Profile (Demographic Information).....	7
3.2.1	Virgin Islands Population.....	7
3.2.2	Geographical Description.....	7
3.3	Usage Guidelines.....	7
3.4	Technical Design Requirements For Licensing.....	8
3.4.1	Definition of Coverage Area.....	8
3.4.2	System Coverage Limitations.....	9
3.4.3	Determination of Coverage.....	9
3.4.4	Annexation and Other Expansions.....	10
3.4.5	Coverage Area Description.....	10
3.4.6	Give-Back Frequencies.....	10
3.4.7	Unused Spectrum.....	11
3.4.8	Adjacent Region Coordination.....	11
3.5	Initial Spectrum Allocation.....	11
3.5.1	Frequency Sorting Methodology.....	11
3.5.2	Geographic Area.....	11
3.5.3	Blocked Channels.....	12
3.5.4	Transmitter Combining.....	12

4.1.4	Coded Squelch.....	14
4.2	Network Operating Method.....	14
4.3	Requirements For Trunking.....	15
4.4	Channel Loading Requirements.....	15
4.4.1	Channel Loading Tables.....	16
4.4.2	Traffic Loading Study.....	16
4.4.3	Slow Growth.....	16
4.5	Use of Long Range Communications.....	16
4.6	Expansion of Existing Systems.....	17
5.0	IMPLEMENTATION AND PROCEDURES	
5.1	Notification.....	18
5.2	Frequency Allocation Process.....	18
5.3	State Map.....	20
5.4	Assignment Statistics.....	21
5.5	Expansion of Initial Allocation.....	21
5.6	Prioritization of Applicants.....	21
5.7	Appeal Process.....	21
6.0	THE REGIONAL PLANNING COMMITTEE.....	22
Exhibit A	25

1.0 SCOPE

1.1 Introduction

In December of 1983, the United States Congress directed the Federal Communications Commission (FCC) to establish a plan to ensure that the communications needs of state and local public safety authorities would be met. By their regular means of initiation, the FCC began the process of developing such a plan. Through their efforts, and the efforts of the National Public Safety Planning Advisory Committee (NPSPAC) the plan was begun.

The National Public Safety Planning Advisory Committee provided an opportunity for the public safety community and other interested members of the public to participate in an overall spectrum management approach by recommending policy guidelines, technical standards, and procedures to satisfy public safety needs for the foreseeable future. After consideration of NPSPAC's Final Report and comments filed in Docket No. 87-112, a Report and Order was released by the FCC in December 1987, which established a structure for the National Plan that consists of guidelines for the development of regional plans.

The National Plan provides guidelines for the development of regional plans. The particulars of this plan are found in FCC 87-359, which contains the required steps and contents for regional plan development. It is on this document that this plan is developed.

1.2 Purpose

Public safety communications has, for many years, been inadequate throughout the United States. This is as true for the United States Virgin Islands (V.I.) as it is for any other state. Many, if not all, public safety radio users are constantly bombarded with outside interference, noise, and over crowding. It is with these problems in mind that this plan was developed.

This regional plan was developed with the objective of assuring all levels of public safety/public service agencies that radio communications in the near and distant future will not suffer from the problems of the past. The allocation of frequencies was done in as equitable a way as possible. The goal was to supply a pool of frequencies for each county and a pool for state agency use with adequate reserve allocations for future needs in all areas, and a method to appeal initial allocations based on need.

The National Plan, as developed by NPSPAC, was followed very closely in all considerations for frequency allocation, re-use, turn back, regional interoperability, spectrum requirements and adjacent region operations. This plan should provide the flexibility to accommodate the growth and changes which are bound to occur in public safety and public service communications operations long into the future.

2.0 AUTHORITY

2.1 Regional Planning Committee

The development of the Public-Safety Radio Communications Plan for Region 48, the V.I. has followed the requirements of the FCC's Report and Order as issued in the matter of General Docket 87-112.

In accordance with the FCC's Report and Order 87-112, the Associated Public-Safety Communications Officers Inc. (APCO) recommended to the Commission the appointment of a "Convenor" for V.I. Region 48. The Convenor served as the coordinator for the assembly and formation of the planning committee.

Participants in the formation of the Regional Planning Committee represent interested parties from both the Public Safety and Special Emergency Radio Services. A total of 18 individuals did participate in the original meeting and voted on the plan to be accepted by the members. See exhibit A.

The committee was selected by attendance at the planning meetings. Each member of the Committee representing an eligible licensee under the Public Safety Radio Services and the Special Emergency Radio Services was entitled to one vote. Except as may be provided elsewhere in the Plan, the majority of those present at a scheduled meeting constituted a majority for all business. This way, the finished plan was accepted by the widest, within reason, group of public safety/public service users.

2.2 Planning Committee Formation

The process of forming the Planning Committee was conducted in the following steps:

1. A public notice was submitted to each public safety and major vendor throughout the Islands. See exhibit A.
2. Committee membership was left open to any person or agency which may not have been notified or decided to join the committee later.
3. Vendors participation was encouraged, but vendors were not allowed a vote.

2.3 National Interrelationships

The Regional Plan is in conformity with the National Plan. If there is a conflict between the two plans, the National Plan will govern. It is expected that Regional Plans for other areas of the country may differ from this plan due to the broad differences in circumstance, geography, and population density. By officially sanctioning this plan the Federal Communications Commission agrees to its conformity to the National Plan. Nothing in the Plan is to interfere with the proper functions and duties of the organizations appointed by the FCC for frequency coordination in the Private Land Mobile Radio Services, but rather it provides procedures that are the consensus of the Public Safety Radio Services and Special Emergency Radio Service user agencies in this Region. If there is a perceived conflict then the judgment of the FCC will prevail.

2.4 Federal Interoperability

Interoperability between the Federal, State and Local Governments during both daily and disaster operations will primarily take place on the five common channels identified in the National Plan. Additionally, through the use of S-160 or equivalent agreements, a licensee may permit Federal use of a non-Federal communications system. Such use, on other than the five identified common channels, is to be in full compliance with FCC requirements for government use of non-government frequencies (Title 47 CFR, sec 2.103). It is permissible for a non-Federal government licensee to increase channel requirements to account for 2-10 percent increase in mobile units, dependent on the amount of Federal Government Agencies involvement in its area, provided that written documentation from Federal agencies supports at least that number of increased units.

2.5 Regional Review Committee

Upon approval of this Plan by the Federal Communications Commission, a Region Review Committee will be established for the review of applications which do not fall within the stated guidelines provided for in this plan, or for the settlement of disputes concerning this plan and/or its application.

This committee shall consist of the Local APCO Frequency Advisor for this region, a state agency representative, one representative from the Police, Fire and EMS services, and a minimum representation from other eligibles is also welcome. This committee and its composition will be assured by the Caribbean APCO chapter and other Public Safety organizations. Membership on this committee will be solicited on an annual basis. Since this committee will probably not have regular business, it will be up to the Local APCO Frequency Advisor to notify the committee of problems, conflicts, or when it becomes apparent that spectrum demands will outpace available spectrum. Each member of the committee shall be furnished a copy of this plan upon their appointment or election to the committee.

Plan updates shall be accomplished by this committee. All changes or updates to the plan shall be first agreed upon by this committee and then submitted to the FCC for their review and consideration. When approved all changes shall be added to the plan with the appropriate documentation of approval.

This committee shall meet at least once annually to review the implementation of the plan. This review shall consist of examination of any and all license activity.

3.0 SPECTRUM UTILIZATION

This portion of the Plan provides a basis for proper spectrum utilization. Its purpose is to guide the Local APCO Frequency Advisor and/or the Regional Review Committee in their task of evaluating the implementation of this plan within this Region.

3.1 Region Defined

Region 48 is the United States Virgin Islands (V.I.). This region is the result of definition by the Federal Communications Commission as a result of recommendations made in the National Public Safety Planning Advisory Committee (NPSPAC) plan as submitted and approved and contained in Docket 87-112. For purposes of this plan the V.I. shall be defined as all the lands and waters contained within the boundaries of the United States Virgin Islands.

3.2 Region Profile (Demographic Information)

The purpose of this section is to provide the basis for the assignment of frequencies, and their re-use. Since the frequency allocation formula used is based on population within a district, it is necessary to provide this information within this plan. Below is the data used in the determination of frequency allocations.

3.2.1 The V.I. Population And Expected Growth Percentage.

The total population of V.I. is 101,809.00 which is broken down into two (2) districts. One is the district of St. Croix with population of 50,139.00 and the second one is the district of St. Thomas-St. John with population of 51,670.00. The expected population growth for the entire Islands is 5% or about 6,000.00.

3.2.2 Geographical Description

The total land mass is 134 square miles. The largest district is St. Croix with a total of 92 square miles.

3.3 Usage Guidelines (continued)

Systems of four or less channels operating in the conventional mode who do not meet FCC loading standards will be required to share the frequency on a non-exclusive basis.

Public Safety communications at the Islands level, as it impacts the Region, will be reviewed by the Committee. Islands-wide public safety agencies will submit their communications plans for impact approval if they utilize communications systems within the Region and those portions of such systems must be compatible with the Regional Plan.

Communication coverage beyond the bounds of a jurisdictional area of concern cannot be tolerated unless it is critical to the protection of life and property. If the 800 MHz trunked radio technology is utilized, the system design must include as many county/multiple municipality government public safety and public service radio users as can be managed technically.

The district agency(ies), depending upon systems loading and the need for multiple systems within an area, must provide intercommunications between area-wide systems. In a multi-agency environment, a lead agency using the 800 MHz spectrum, which is an agency or organization having primary response obligations in the geographic area, shall be responsible for coordinating the implementation the Common Channels in this band as mandated by the National Plan. Such implementation must be reviewed and approved by the Local APCO Frequency Advisor, and at his/her discretion, the Regional Review Committee.

If the total number of radios in service does not reach minimum loading criteria for a trunked system, that must consider utilizing the next higher system level if 800 MHz trunked radio is available in the area. As those higher level systems reach capacity, the smaller system communicators in public safety and public service must then consider uniting their communications efforts to formulate one large system or forfeit use of the limited 800 MHz spectrum.

Where smaller conventional 800 MHz needs are requested, those frequencies to be utilized must not interfere with the region's trunked systems. The 800 MHz trunked radio system is to be considered the higher technology at this time and in greater compliance with FCC guidelines. The amount of interference that can be tolerated depends on the service affected. Personal life and property protection shall receive the highest priority and disruptive interference with communications involved in these services in an area shall not be tolerated. Any co-channel interference within an authorized area of coverage will be examined on a case by case basis by the Regional Review Committee.

3.4 Technical Design Requirements For Licensing

3.4.1 Definition of Coverage Area or Area of Jurisdiction

The coverage area shall be that area for which a system is intended to cover with a received signal strength of greater than 40 dBu. This area shall normally represent the boundaries of the district or the incorporated municipality which is applying for license. In the case of regional or area-wide, multi-jurisdictional systems, the coverage shall be that area of all jurisdictions participating in the system combined.

3.4.2 System Coverage Limitations

System coverage shall be limited to the coverage area defined as listed above plus no more than three (3) additional miles in all directions extending from said boundaries of definition. This limitation shall assure maximum frequency reuse. The only exception to this rule shall be those applicants wishing to offer service or system use to areas outside of their jurisdictional boundaries. In these situations the applicant shall provide a proposal of said service to the Local APCO Frequency Advisor, who may request Regional Review Committee consideration, for approval.

Systems not located within the geographical center of the jurisdiction(s) for which they cover shall utilize either directional antennas or antenna/tower relationship techniques to achieve the coverage required by this plan.

3.4.3 Determination Of Coverage

There are four variables used in determining the area of coverage of a proposed system. These variables are; The required strength of the received signal, Antenna height above average terrain (HAAT), The effective radiated power (ERP) of the system and The type of environment.

Received Signal Strength:

For purposes of this plan, received signal strength shall be the determining factor which defines the actual boundary of a system. The minimum signal level which marks the outer boundary of a system shall be 40 dBu.

Antenna Height:

Shall be the height of the antenna above the average terrain surrounding the tower site.

Effective Radiated Power (ERP):

The ERP is the transmitter output power times the net gain of the antenna system. The actual formula is: $ERP(w) = Power(w) \times Antilog(\text{net gain in dB divided by } 10)$.

Environment Type:

OKUMURA/HATA METHOD - The Okumura method uses four different classifications to describe the average terrain around a transmitter site or area. The classifications are:

1-URBAN; Which is built-up city-crowded with large buildings or closely interspersed with houses and thickley-grown trees. This would include the downtown area of a major city.

2-SUBURBAN; Which is a city of highway scattered with trees, houses and buildings. This would include the downtown area of a large city.

3-QUASI-OPEN; Is an area between suburban and open areas. This includes areas outside of city limits that have few buildings and houses.

4-OPEN; Is an area where there are no obstacles such as tall trees or buildings in the propagation path or a plot of land which is cleared of anything for 300 to 400 meters ahead. This would include farm land, open fields, etc.

3.4.3 Determination Of Coverage (continued)

Preparation of these requirements shall be the responsibility of the applicant. The Federal Communications Commission provides, in part 90.309(a)(4) of the Rules and Regulations, some additional guidance for these calculations.

3.4.4 Annexations And Other Expansions

When an expansion of the present municipality limits of any municipality currently using an 800 megahertz system within the spectrum as herein specified occurs, it is understood that the existing system may have to be expanded and its range increased. This is a modification and may be permitted. The increased range of the system will have to be determined at the time of modification to assure non-

3.4.6 Give-Back Frequencies (continued)

acceptable in most cases, with two years as a maximum. Any agency requiring more than two years shall provide documents stating the reasons for the delay, and give the estimated time of completion.

3.4.7 Unused Spectrum

Due to the fact that all of the frequency spectrum is not needed at this time, the excess channel pairs will be returned to a reserve pool. These channels may be used for conflict with adjacent Region allocations or may simply remain within this Region until needed. This does not imply that these frequencies are unavailable, only that before they can be utilized within the Region they must be coordinated via the regular APCO coordination process and within the guidelines set forth in this plan. Where possible, the channels designated for a jurisdiction in this plan shall be used.

3.4.8 Adjacent Region Coordination

Coordination with adjacent regions shall be an on-going process until all region plans have been finalized. At present, all adjacent regions have been coordinated with and no conflicts have been identified. The adjacent region with which coordination has been conducted is: The Commonwealth of Puerto Rico (Region 47) .

As the use of the five International channels is not considered a day-to-day function, the "hard" coordination for the use of these channels is not considered to be necessary or advisable. The use of these channels will always be on a non-interference basis, with on-the-air coordination at the time of use when required. Any user found to be operating in any manner other than this shall be considered to be operating improperly and subject to the existing Federal Communications Commission rules for willful interference with the communications of other users.

3.5 Initial Spectrum Allocation

3.5.1 Frequency Sorting Methodology

The initial spectrum allocation for the Region was confirmed by a computerized frequency sorting process performed by APCO. The purpose of the computer program which assigns frequencies to specific eligibles and to pools for future assignments is two-fold:

The assignments must result in a high degree of spectrum efficiency, and

The assignments must result in a low probability of co-channel and adjacent channel interference.

3.5.2 Geographic Area

For the purpose of this frequency sort, a geographic area is defined as one or more circles of equal radius. To the degree practical, the circle(s) should include the entire area of the eligible's geopolitical boundary, but not exceed the boundary by more than three (3) miles. Thus, the procedure is to gather maps of

3.5.2 Geographic Area (continued)

sufficient detail, outline the areas to be defined, determine the coordinates and radius of the circles which define each area, and tabulate the data.

3.5.3 Blocked Channels

In the Region there are five mutual aid channels which must be blocked out to prevent the computer from making assignments on these channels. (Since the mutual aid channels are spaced at 0.5 MHz intervals, other Region-wide systems are spaced at 0.5 MHz and placed adjacent to the mutual aid channels. This procedure reduces the impact of blocked adjacent channels by virtue of the fact that the channel plan already has protection spacing on each side of the mutual aid channels.)

These Region-wide blocked channels are identified by FCC channel number, tabulated and they become input to the computer program.

3.5.4 Transmitter Combining

The computer program is designed to provide a minimum frequency separation between any two channels assigned to the same eligible at the same site. This separation is provided in order to enable more efficient combining of multiple transmitters to a single antenna. These separated blocks of frequencies also have a maximum size. That is, if the eligible has more frequencies than the maximum size of the combining block, then a second compatible block is created, and so on. Each of these parameters is adjustable in the program on a global basis. The default parameters chosen are 0.25MHz minimum spacing and five channel blocks.

3.5.5 Special Considerations

There are licensees in the 806-821/852-866 MHz spectrum who plan to expand existing systems into the 821-824/866-869 MHz bands. Some of the existing radio units are unable to operate on 12.5 KHz separated carrier frequencies. The result is that these radios can only operate on "even" FCC numbered channels in the 821-824/866-869 MHz band. The computer program is able to take this into account when making assignments.

3.5.6 Protection Ratios

There are two interference protection ratios built into the computer program. One is for the co-channel case, the other is for the adjacent channel case. The ratios provide 40 dB Desired/Undesired signal ratio for co-channel assignments, and 15 dB Desired/Undesired ratio for the adjacent channel case. These ratios provide an acceptable probability of interference for Public Safety Services.

4.0 COMMUNICATIONS REQUIREMENTS

4.1 Common Channel Implementation

The implementation of the International Common Channels must follow the guidelines as set forth by the Federal Communications Commission by the approval of the National Plan. These five common channels are accessible by all levels of government and shall be used in accordance with the provisions of the National Plan. All mobile and portable equipment must be equipped to operate in the "talkaround mode" when required on the International Channels.

The International calling channel (821/866.0125 MHz) shall be implemented as a full mobile relay. Wide area coverage transmitters will be installed where applicable within a system. Large system users (5 channels or more) of 800 MHz shall be required to monitor this channel at all times. The area of coverage for this channel shall be equal to the area covered by the licensed system. This may or may not require the use of satellite receivers within the area to meet this requirement.

The four International Tactical (ITAC) Channels will be assigned State-wide, for use as needed by all eligible licensees. These channels are to be used in accordance with the National Plan and in compliance with the regulations as set forth by the Federal Communications Commission. These channels require no special licensing, only that the users be eligible for licensing on the other Public Safety 800 MHz channels as specified in section 90.616 (a) of the FCC Rules and Regulations.

4.1.1 Areas of Operation

The common channels shall be available for use throughout the Region. No specific assignments were deemed necessary within the Region.

4.1.2 Operation on The Common Channels

Normally, the five interoperable channels are to be used only for activities requiring inter-communications between agencies not sharing any other compatible communications system. Interoperable channels are not to be used by any level agency for routine, daily operations. In major emergency situations, one or more ITAC channels may be assigned by the primary Public Safety Agency within that area of operation. The primary Public Safety agency in each district, if not defined elsewhere in the plan, shall be the Police Department or Public Safety Department or the lead agency, which may be any agency licensed to operate in this spectrum, or "on-scene" commander. These primary agencies will assign one or more of the ITAC channels for use according to need during each special situation requiring the use of these channels.

Participants in the interoperable channels include Federal, State, and Local Disaster Management agencies. Police, Fire, and providers of Basic and Advanced Life support services will be the primary using agencies. If radio channels are available, other services provided in the Public Safety Radio Services and the Special Emergency Radio Services may also participate to the extent required to insure the safety of the public. These agencies include the Highway Department, Motor Vehicle Comptroller, Forestry, Wildlife and other special service agencies not normally involved in day-to-day public safety operations.

4.1.3 Operation Procedures

On all Common Channels, plain English will be used at all times, and the use of unfamiliar terms, phrases, or codes will not be allowed.

4.1.3 (I) International Calling Channel (ICALL):

The ICALL channel shall be used to establish contact with other users in a particular Region that can render assistance at an incident. This channel shall not be utilized as an ongoing working channel. Once contact has been established between agencies, an agreed upon ITAC or mutual aid channel shall be used for continued communications.

4.1.3 (II) International Tactical Channels (ITAC-1 - ITAC-4):

These frequencies are reserved for use by those agencies involved in inter-agency communications. Incidents requiring multi-agency participation will utilize these frequencies as directed by the control agency assuming responsibility for an incident or area of concern. These frequencies may be subdivided according to function in an incident or by geographical location in response to an incident. It is recommended that the following assignments for ITAC-1 through ITAC-4 be used when possible.

ITAC-1..... Law Enforcement
ITAC-2Fire Services
ITAC-3Emergency Medical Services
ITAC-4Command and Control

4.1.4 Coded Squelch

All equipment capable of operating on the five (5) common channels shall be equipped with the National Common Tone Squelch of 156.7 Hz. Mobile relays on these channels, if authorized, may use additional tone or digital squelch codes for the purpose of selecting individual mobile relay stations, provided the National Common Tone Squelch Code is used on the output. If such an arrangement is utilized, provision must also be made for certain centralized, high level sites to be activated by the 156.7 tone to ensure emergency access by transient units.

4.2 Network Operating Methods

Communications systems on ITAC-1 thru ITAC-4 will be implemented by agencies who volunteer on a distributed coordinated basis. Every primary geographic section of the Region is intended to be covered by at least one of the ITAC channels. In many areas the common channels will be utilized on a mobile to mobile talk-around basis. Mobile relays on ITAC-1 thru ITAC-4 will be on a limited coverage design to permit reuse of the channel several times within the Region and in adjacent regions. Since Region 48 will probably not have a large number of stationary ITAC Channel stations, the implementation of mobile relay or repeaters is strongly encouraged. This will fill an "on-scene" requirement for most multi-agency response situations. Adjacent region coordination will be via existing mutual aid coordination procedures with the requesting region establishing the tactical frequency assignment.

4.3 Requirements For Trunking

All systems operating in the Region having five or more channels will be required to be trunked. Those systems having four or less channels may be conventional. It is strongly suggested that any entity licensing three or more repeaters use trunking.

The FCC in its Report and Order states: "Exceptions will be permitted only when a substantial showing is made that alternative technology would be at least as efficient as trunking or that trunking would not meet operational requirements. Exceptions will not be granted routinely. Strong showings as to why trunking is unacceptable must be presented in support of any request for exception."

Systems that do not meet FCC loading standards can be required to share such frequencies on a non-exclusive basis. Those agencies requesting Data channels only can be required to share channels with adjacent agencies wherever feasible or limit coverage to their geographic area. Exceptions will be considered on a case-by-case basis by the Regional Review Committee.

Depending on systems loading and the need for multiple systems within an area, operators of wide area systems (including, but not limited to, designated "Monitoring Agencies") must provide for coordination between area-wide systems and "Monitoring Agencies". Single municipalities or agencies must restrict design and implementation of their systems(s) to provide only the communications needed within its geopolitical boundaries. The use of trunked systems is encouraged. However, if the total number of radios in service does not reach minimum loading criteria for a trunked system, that user must consider utilizing the next higher system level if 800 MHz trunked radio is available in the area. As systems reach capacity, the smaller system users must consider consolidating their communications systems to formulate one large trunked system.

A requesting applicant for radio communications in the 800 MHz public safety services in the Region will be required to conform to the FCC loading criteria for its proposed system. The provisions of this regional plan must be used as a guide for establishing any new systems. Strict adherence for limiting the area of coverage to the boundaries of the applicant agency's jurisdiction must be observed. Overlap or extended coverage must be minimized, even where systems utilizing 800 MHz trunked radio systems are proposing to intermix systems for cooperative and/or mutual aid purposes.

Antenna heights are to be limited to provide only the necessary coverage for a system. When antenna locations are restricted to only the "high-ground", transmitter outputs and special antenna patterns must be employed to produce only the necessary coverage with the proper amount of ERP. All necessary precautions are to be taken to gain maximum reuse of the limited 800 MHz spectrum.

4.4 Channel Loading Requirements

An agency/jurisdiction requesting a single frequency to replace a frequency currently in use that will be turned back for reassignment will not be required to meet loading requirements in order to obtain the new frequency. However, if the single frequency is not loaded to more than 50 units within three years after the license is granted, the frequency will be available for assignment to other agencies on a shared basis in the event that other frequencies meeting the criteria for assignment are exhausted. Shared use of a frequency is not interference free. Users of single frequency systems may be required to provide the Regional Review Committee "confirmation of loading" for mobiles and portables as a method of validating system loading. This exception shall apply to agencies having only one system and a single frequency. Agencies/jurisdictions requesting multiple frequencies or employing trunking technology shall

4.4 Channel Loading Requirements (continued)

comply with the loading standards as outlined below or provide a "Traffic Loading Study" that meets the criteria as outlined below.

4.4.1 Loading Tables

EMERGENCY		NON-EMERGENCY	
CHANNELS	UNITS/CHANNEL	CHANNELS	UNITS/CHANNEL
5	70	1 - 5	80
10	75	6 - 10	90
15	80	11 - 15	105
20	85	16 - 20	120

Agencies requesting additional frequencies must show loading of 100 percent or greater on their existing system. Should a demand for frequencies exist after assignable frequencies become exhausted, any system having frequencies assigned under this plan four or more years previously and not loaded to at least 70 percent will lose operating authority on a sufficient number of frequencies to bring the system into compliance with the 70 percent loading standard. Frequencies lost in this manner will be reallocated to other agencies to help satisfy the demand for additional frequencies.

4.4.2 Traffic Loading Study

Justification for adding frequencies, or retaining existing frequencies, can be provided by a traffic loading study in lieu of loading by number of transmitters per channel. It will be the responsibility of the requesting agency to provide a verifiable study showing sufficient airtime usage to merit additional frequencies. A showing of airtime usage, excluding telephone interconnect air time, during the peak busy hour greater than 70 percent per channel on three consecutive days will be required to satisfy loading criteria.

4.4.3 Slow Growth

All systems in the 821-824/866-869 MHZ bands under this plan will be slow growth in accordance with Section 90.629 Of the Commission's rules.

4.5 Use of Long Range Communications

During incidents of major proportions, where Public Safety requirements might include the need for long-range communications in and out of a disaster area, alternate radio communications plans are to be addressed by Primary Public Safety agencies within this sub-region. These agencies should integrate the

4.5 Use of Long Range Communications (continued)

appropriate interface to the long distance communications providers. Such long distance radio communications might be amateur radio operations, satellite communications and/or long range emergency preparedness communications systems, any of or all of which should be incorporated as part of the communications plans of those lead agencies. They then could provide the means to communicate outside the area for themselves and the smaller agencies who might need assistance.

Instances as addressed in the National Public Safety Planning Advisory Committee's Plan, such as earthquakes, hurricanes, floods, widespread forest fires, or nuclear reactor problems could be a cause for such long-range communications needs.

4.6 Expansion of Existing Systems

Existing systems that are to be expanded to include the frequency bands of 821-824/866-869 MHz will have the mobile radios "grandfathered", provided that they are modified in conformance with the Memorandum Opinion and Order, FCC Docket 87-112. Primarily this involves reducing the modulation to +/- 4 KHz. Existing base stations in the frequency bands 806-821/851-866 MHz may not be used in the frequency bands 821-824/866-869 MHz.

5.0 IMPLEMENTATION AND PROCEDURES

5.1 Notification

A public notice was submitted to each public safety and major vendor throughout the Islands. See exhibit A.

During the initial meeting, names, addresses and telephone numbers of those individuals present who wished to either participate in the planning process, or who wanted to be kept informed on the progress of the planning effort were taken.

Each member of the planning committee was presented with a draft copy of the plan for study. A copy of

5.2 Frequency Allocation Process (continued)

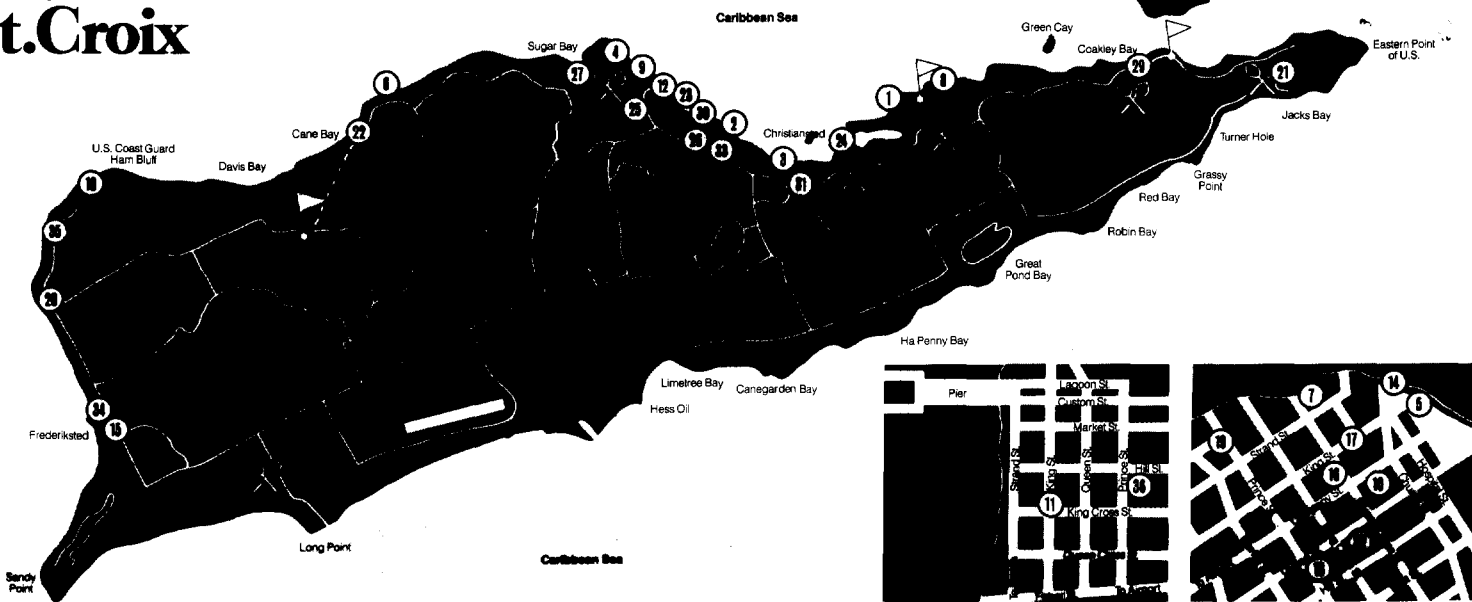
Pooled Frequencies For Any Public Safety or Public Service Agencies Islands-wide:

605, 609, 613, 617, 621, 625, 629, 633, 637, 643, 647, 651, 655, 659,
663, 667, 671, 681, 685, 689, 693, 697, 701, 705, 709, 713, 719, 723,
727, 731, 735, 739, 743, 747, 751, 757, 761, 765, 769, 773, 777, 781,
785, 789, 793, 801, 805, 809, 813, 816, 821, 822, 823, 824, 825, 826,
827, 828, 829, 830

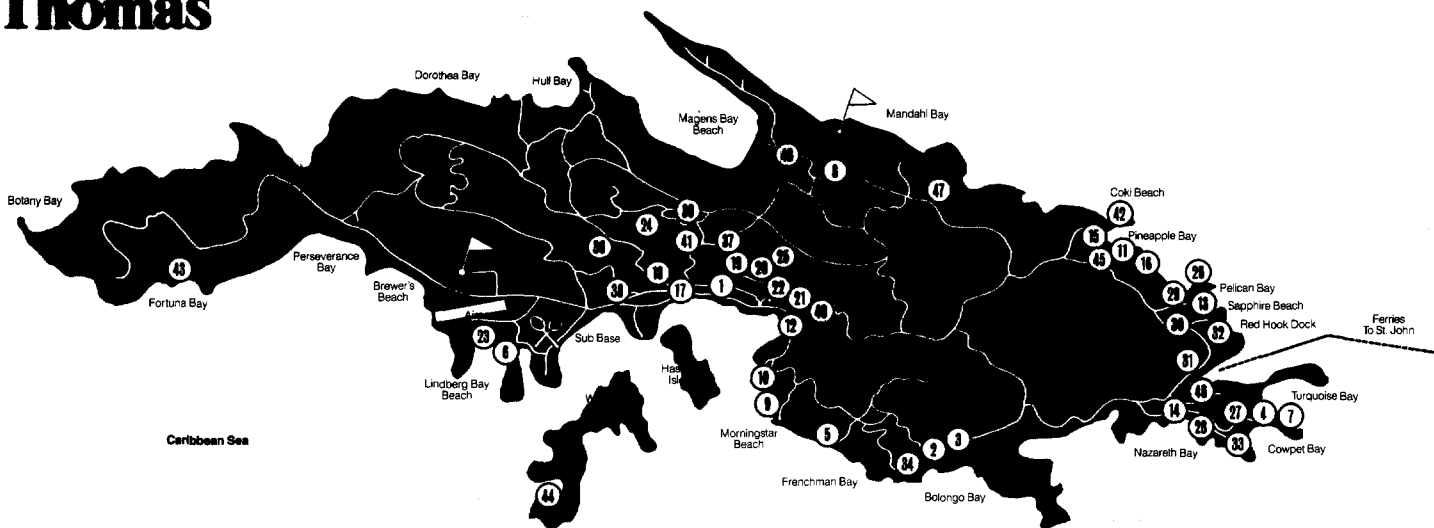
**CHANNELS THAT DO NOT APPEAR IN THIS LIST ARE BASED ON
ANTICIPATING ADJACENT CHANNEL INTERFERENCE WITHIN
THE REGION OR CO-CHANNEL INTERFERENCE WITH THE
COMMONWEALTH OF PUERTO RICO, REGION 47.**

5.3 The map of the United States Virgin Islands.

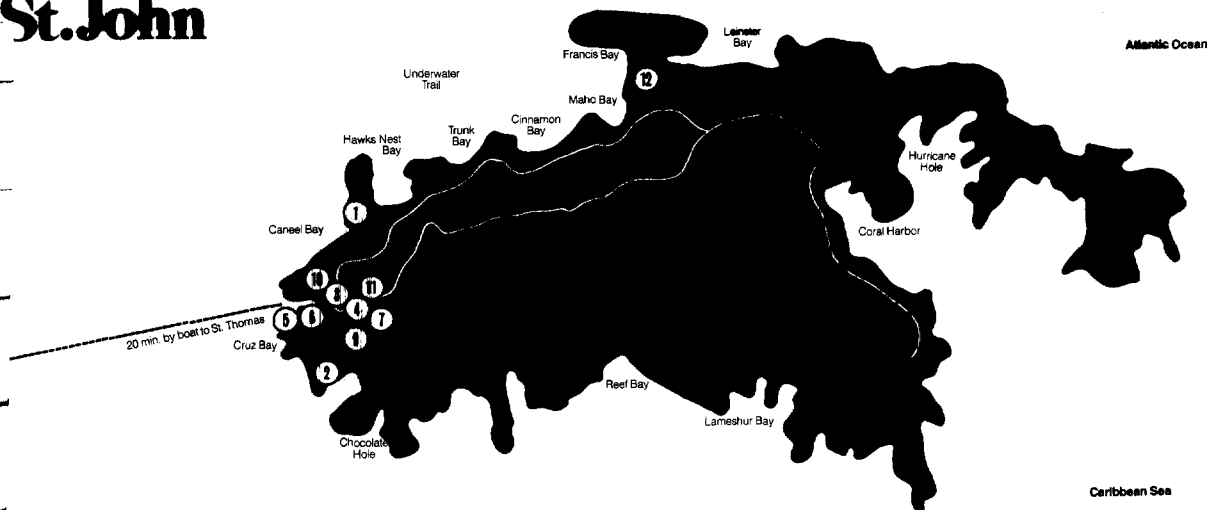
St. Croix



St. Thomas



St. John



St. Thomas • St. John

St. Croix

CARIBBEAN

For more information, call **1-800-USVI-INFO**. Or see your travel agent, or contact the office of the United States Virgin Islands Division of Tourism nearest you.

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Chicago: 122 South Michigan Ave., Suite 1270, Chicago, IL 60603. 312/461-0180, Fax: 461-0765.

Los Angeles: 3460 Wilshire Blvd., Suite 412, Los Angeles, CA 90010. 213/739-0138, Fax: 739-2005.

Miami: 2655 Le Jeune Road, Suite 907, Coral Gables, FL 33134. 305/442-7200, Fax: 445-9044.

New York City: 1270 Avenue of the Americas, New York, NY 10020. 212/582-4520, Fax: 581-3405.

Washington, D.C.: 900 17th Street N.W., Suite 500, Washington, D.C. 20006. 202/293-3707, Fax: 785-2542.

San Juan: 1300 Ashford Avenue, Condado, Santurce, Puerto Rico 00907. 809/724-3816, Fax: 724-7223.

St. Croix: P.O. Box 4538, Christiansted, United States Virgin Islands 00822. 809/773-0495, Fax: 778-9259.

Frederiksted, Custom House Bldg., Strand St., United States Virgin Islands 00840. 809/772-0357.

St. John: P.O. Box 200, Cruz Bay, United States Virgin Islands 00830. 809/776-6450.

St. Thomas: P.O. Box 6400, Charlotte Amalie, United States Virgin Islands 00804. 809/774-8784, Fax: 774-439

Canada: 33 Niagara Street, Toronto, M5V 1C2. 416/362-8784 or 800/465-8784, Fax: 362-9841.

Europe: England: 2 Cinnamon Row, Plantation Wharf, York Place, London SW11 3TW. (071) 978-5262, Tlx: 27231, Fax: 924-3171.

Germany: Grazer Str. 3-5, 6050 Offenbach. (069) 892008, Fax: 898892.

Italy: Via Gherardini 2, 20145 Milano. (02) 33105841, Tlx: 331494, Fax: 33105827.

Japan: Discover America Marketing, Inc., Suite B234B, Hibiya Kokusai Bldg. 2-3, Uchisaiwaicho 2-chome, Chiyoda-ku, Tokyo 100. (3) 3597-9451, Fax: (3) 3597-038

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Continental Airlines: Nonstop from Newark to St. Thomas/St. Croix. Connecting from Boston, Chicago, Detroit and Philadelphia via Newark.

Air Airlines: Nonstop from Atlanta to St. Thomas. Stop from Orlando to St. Thomas, continuing to St. Croix. Connecting from Charleston, Chicago, Cincinnati, Dallas, Denver, Detroit, Houston, Indianapolis/St. Paul, New Orleans, St. Louis and Washington D.C. via Atlanta to San Juan. Through service from Los Angeles to San Juan. (Flights into San Juan connect into St. Croix/St. Thomas on convenient commuter airlines.)

Air Airlines: Nonstop from Savannah to St. Thomas. Continuing to St. Croix. Connecting from Atlanta, Boston, Chicago, Newark and Philadelphia via Savannah.

Island Air Transport (LIAT): Service from St. Thomas, St. Croix and San Juan to Caribbean islands to the south.

Air Shuttle: Frequent daily flights between St. Thomas and St. Croix; one flight daily from San Juan; additional flights to St. John.

Air Express: Frequent jet-prop and on-time service between St. Croix and St. Thomas. Also service between St. Croix and St. Croix and return.

World Airways: Nonstop from New York, St. Louis and Miami to San Juan. (Flights into San Juan connect into St. Croix/St. Thomas on convenient commuter airlines.)

Air: Nonstop from Baltimore, Charlotte and Philadelphia to San Juan. (Flights into San Juan connect into St. Croix/St. Thomas on convenient commuter airlines.)

Island Air: Passenger/freight between San Juan, St. Thomas and St. Croix and islands to the south. After ambulance.

Sea: Major cruise lines operate year round between St. Thomas and St. Croix and return. There are also

5.4 Assignment Statistics

Maximum field strength for co-channel operation is **5 Dbu**

Maximum field strength for adjacent channel operation is **25 Dbu**

Total number of channels assigned **47**

Total number of reserved channels **60**

NOTE: There are some channels that could be used from **FCC Part 90.613 table**, whenever there are shortage of frequencies. The decision to allocate more channels to the requesting agencies than already assigned per plan, would fall under the Regional Review Committee authority.

5.5 Expansion of Initial Allocation

In the event that the allocation for any district becomes depleted, the Region Review Committee shall meet to make further allocations to said district. Should this occur, the applying agency or entity shall submit the proper license and coordination applications with all applicable fees, as in any other licensing request. Allocations will be made based on the initial frequency allocation plan as mentioned above, taking into consideration the channels which were returned to the reserve pool.

5.6 Prioritization of Applicants

A very simple method of prioritization has been chosen for use in this Region. As there is no unmet spectrum requirement, there appears to be no great need for prioritization. In order to facilitate future problems which may arise, the following rating system shall be used.

Prioritization shall be done according to a final score, based on applicant criteria. The highest score, in points, shall be given priority in a situation where spectrum is insufficient to fulfill the needs of all.

Public Safety Agencies.....	2 Points
Public Services Agencies.....	1 Point
Multi-agency Systems.....	2 Points
Multi-agency/Multi Jurisdiction Systems.....	3 Points
Single Agency/Jurisdiction Systems.....	1 Point

5.7 Appeal Process

At any time, any applicant may appeal an allocation, rejection, or any limits placed on a particular application for any reason. The appeal process has three levels; the Region Review Committee, APCO INC. and the FCC. An applicant who decides to appeal a rejection should initiate that appeal immediately upon notification of rejection. In the event that an appeal reaches the FCC, their decision will be final and binding upon all parties.